

Product name:	PRONTOFIX HARDENER	Page:	1/11
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	CA-EN/2.0

1. IDENTIFICATION

Product identifier

Product name: PRONTOFIX HARDENER
Cat. No. 40200108, 40200110 (and mixed with ProntoFix Accelerator in the recommended ratio)

Container size: 280 ml, 500 ml

Recommended use and restrictions on use

Application: For embedding and impregnation of materialographic specimens

Details of the supplier of the safety data sheet

Supplier: Struers Ltd
7275 West Credit Avenue
Ontario L5N 5M9 Mississauga
Canada
Tel: +1 (905) 8148855

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to: struers@struers.dk

Emergency telephone number

Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414
British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911
Ontario:
Poison Centre: 1-800-268-9017
Québec:
Poison Control Centre: 1-800-463-5060

Infotrac:
1-800-535-5053
Struers CAN:
+1 (905) 8148855
(Only during office hours)

2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015: Acute (Oral) Toxicity — Category 4
Skin Corrosion — Category 1A
Serious Eye Damage — Category 1
Skin Sensitizer — Category 1
Reproductive Toxicity — Category 2
Specific Target Organ Toxicity — Single Exposure — Category 3 (respiratory tract irritation)
Aquatic Chronic Toxicity — Category 1

Label elements

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Danger

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H410	Very toxic to aquatic life with long lasting effects.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/container in accordance with local regulations.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

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Other hazards

Vapors are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung edema.

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: Amines. (*)

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WHMIS 2015:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
25-<40	98-54-4	202-679-0	01-2119489419-21-xxxx	4-tert-Butylphenol	Skin Irritation Category 2 Serious Eye Damage Category 1 Reproductive Toxicity Category 2 Specific Target Organ Toxicity Single Exposure Category 3 Aquatic Chronic Toxicity Category 1	
20-<30	1477-55-0	216-032-5	01-2119480150-50-xxxx	m-Phenylenebis (methylamine)	Acute (Oral) Toxicity Category 4 Acute (Inhalation) Toxicity Category 4 Skin Corrosion Category 1B Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 3	
15-<25	90640-67-8	292-588-2	-	Polyethylenepolyamines	Acute (Oral) Toxicity Category 4 Acute (Dermal) Toxicity Category 4 Skin Corrosion Category 1B Serious Eye Damage Category 1 Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 3	
15-<20	158800-93-2	-	-	Formaldehyde, reaction products with 1,3-benzenedimethanamine and tert-butylphenol	Acute (Oral) Toxicity Category 4 Acute (Dermal) Toxicity Category 4 Skin Corrosion Category 1B Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 2	
5-<20	15520-10-2	239-556-6	01-2119976310-41-xxxx	2-Methyl-1,5-pentamethylenediamine	Acute (Oral) Toxicity Category 4 Acute (Inhalation) Toxicity Category 4 Skin Corrosion Category 1A	

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4. FIRST-AID MEASURES

Description of first-aid measures

Inhalation: Move injured person into fresh air immediately. Call an ambulance. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Bring these instructions.

Skin contact: Flush immediately with plenty of water and remove contaminated clothing. Call an ambulance, continue to rinse during transportation to hospital and take along these instructions.

Eye contact: Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital taking along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Specific hazards arising from the hazardous product

Specific hazards: During fire, health hazardous gases may be formed.

Advice for fire-fighters

Protective equipment for fire-fighters: Use air-supplied respirator, gloves and protective goggles.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Protective equipment: Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8. (*)

Emergency procedures: No specific recommendations. For personal protection, see section 8. (*)

Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Dam and absorb spillages with sand, earth or other non-combustible material.

Reference to other items

References: For personal protection, see section 8. For waste disposal, see section 13.

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7. HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Wash hands before breaks and before smoking, eating or drinking.

Technical precautions: Local exhaust is recommended. First-aid equipment, including eye wash bottle, must be available at the work site.

Conditions for safe storage, including any incompatibilities

Storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place.

Specific end-use(s)

Specific use(s): No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Other provincial OEL's may apply.

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
1477-55-0	m-Xylene α, α' -diamine	-	0.1 mg/m ³	C	Skin	BC
1477-55-0	m-Xylene- α, α' -diamine	-	0.1 mg/m ³	C	Pc	Quebec

Notes: Pc: SKIN (percutaneous).

Exposure controls

Engineering measures: Mix and prepare in a place with efficient exhaust ventilation. An eye wash bottle must be available at the work site. Provide access to washing facilities including soap, skin cleanser and fatty cream. Observe Occupational Exposure Limits and minimize the risk of inhalation.

Personal protection: Personal protection equipment should be chosen according to relevant standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type ABEK

Hand protection: Use disposable gloves protecting against epoxy along with cotton gloves closest to the skin. Laminate (PE/EVOH) gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

Environmental Exposure Controls: Not available.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

(*)

<u>Form:</u>	Liquid.
<u>Colour:</u>	Yellowish.
<u>Odour:</u>	Amine.
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	Not available.
<u>Melting point:</u>	Not available.
<u>Boiling point:</u>	180 - 300°C
<u>Flash point:</u>	Not available.
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not available.
<u>Explosion limits:</u>	Not available.
<u>Vapour pressure:</u>	Not available.
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	0.99 - 1.00
<u>Solubility:</u>	Partially soluble in water.
<u>Partition coefficient (n-octanol/water):</u>	Not available.
<u>Auto-ignition temperature (°C):</u>	Not available.
<u>Decomposition temperature (°C):</u>	Not available.
<u>Viscosity:</u>	115 - 200 mPa*s
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	Not available.
<u>Other information</u>	
<u>Other data:</u>	No information available.

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10. STABILITY AND REACTIVITY

Reactivity

Reactivity: Reacts violently with strong oxidizing substances.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

Hazardous Reactions: None under normal conditions.

Conditions to avoid

Conditions/materials to avoid: Moisture, heating and strong oxidizing substances.

Incompatible materials

Incompatible materials: Oxidising materials. Strong acids.

Hazardous decomposition products

Hazardous decomposition products: When heated, toxic and corrosive vapours/gases may be formed.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral): Harmful if swallowed.

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Causes severe burns.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.
National Toxicology Program (NTP): No.
IARC Not Listed.

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

STOT - Single exposure: May cause respiratory irritation.

STOT - Repeated exposure: Based on available data the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation: Vapors are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung edema.

Ingestion: Strongly corrosive. Even small amounts may be fatal. Symptoms are severe burning pains in mouth, throat and stomach.

Specific effects: No information available.

Toxicological data: m-Phenylenebis(methylamine):
LD50 (oral, rat): 930 mg/kg
LC50 (inhalation, rat): 1.34 mg/l

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity: Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Degradability: No data available.

Bioaccumulative potential

Bioaccumulative potential: 4-tert-Butylphenol: log Pow: 3
m-Phenylenebis(methylamine): log Pow: 0.18

Mobility in soil

Mobility: No data available.

Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other adverse effects

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Note that fully cured material is not considered as hazardous waste.

Contaminated packaging: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

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14. TRANSPORT INFORMATION

UN number

UN-No: 2735

UN proper shipping name

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (2-Methyl-1,5-pentamethylen-diamine, m-Phenylenebis(methylamine))

Transport hazard class(es)

Class: 8

Packing group

PG: I

Environmental hazards

Marine pollutant: Yes.

Environmentally Hazardous substance: Yes.

Special precautions for user

Special precautions: None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: Not relevant

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific to the product

Special provisions: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

DSL: Not available. (*)

National regulation: Hazardous Products Regulations, with amendments.
Canadian Environmental Protection Act, Reporting for the Domestic Substances List (DSL), with amendments.
U.S. Department of health and human services: 2011 - Report on Carcinogens - 12th Edition.
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization.
British Columbia: Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, with amendments (2015).
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).

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16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 3, 6, 9, 15.

The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Allan Vorup

Additional information:

Classification according to WHMIS 2015:
Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.
www.dhigroup.com.
